

**By Email Only**

Department for Business, Energy and Industrial Strategy  
Abbey 1, 3rd Floor,  
1 Victoria Street  
London  
SW1H 0ET  
futuresystemoperator@beis.gov.uk

Ofgem  
9 Millbank, London, SW1P 3GE  
E-Mail SOreview@ofgem.gov.uk

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Dear BEIS Code Reform – Electricity Systems Team and Ofgem Industry Code and Licensing Team

**CONSULTATION ON THE FUTURE SYSTEM OPERATOR**

Gemserv is pleased to provide a response to this consultation. Gemserv has a long history of providing services to the electricity and gas markets. We are currently providing code management services for the Smart Energy Code, Retail Energy Code and the UNC – IGT.

We agree there is a need to address the future role of the electricity and gas system operators as they will play a critical role in the transition to a decarbonised and more decentralised Net Zero energy system. The Net Zero energy transition will drive a dramatic change in both the energy mix and in the numbers and types of market participants, with customers becoming increasingly more active in energy markets.

We have summarised our response to the consultation in this covering letter and provided answers to the specific questions in the attached annex. We have also provided a separate response to the related issues in the parallel consultation on code reform.

**Alignment with code reform objectives**

The code reform consultation proposes options for a new institutional governance framework and the associated implementation plans. We strongly support the BEIS/Ofgem reform objectives for a code framework that will:

- be forward-looking, in line with net zero goals and benefit existing and future consumers
- accommodate a growing number of market participants and ensure compliance
- be agile and responsive to change
- make it easier for any market participant to understand the rules

**Gemserv Limited** - Registered in England and Wales. No. 4419878

8 Fenchurch Place, London, EC3M 4AJ

T: +44 (0) 207 090 1000

F: +44 (0) 207 090 1001

W: [www.gemserv.com](http://www.gemserv.com)



In summary, our response is strongly supportive of the need for code governance reform so that it can be fit for purpose to meet the future challenges of a Net Zero energy sector. We support Option 1, which proposes Ofgem as a strategic body with separate licenced code managers, selected by competitive tender. We do not support the FSO being the strategic oversight body for codes nor the integrated code body. We would highlight the following from our response:

- **Scope of reform** - we support that the scope of reform should include a) all existing industry codes plus engineering standards, and b) all delivery roles including those performed by the FSO, Xoserve, Elexon, DCC, and Electralink.
- **Strategic direction** – we agree the BEIS/Ofgem preferred model that Ofgem should be the designated strategic body and should licence Code Managers.
- **Code Manager selection** – we urge that all code management and delivery functions should be competitively tendered, and performance incentivised.
- **Implementation** – we support code consolidation as part of drafting new licences and competitive tenders. We consider that merging gas and electricity codes should be a priority.

***What does this mean for the FSO reform?*** We consider that the proposed FSO institutional reforms should align closely with the objectives of the code reform, creating an entity that is forward-looking, agile, and enabling greater market participation.

### **FSO consultation response summary**

A summary of our responses to the key consultation areas is set out below:

- The case for change - we agree FSO reform should ensure whole system planning and engineering capabilities are in place to deliver Net Zero. But the role of the FSO in realising agile industry-wide transformation seems to be missing. There is a risk that a larger ‘silo’ is created.
- Role of FSO – we agree the FSO’s proposed strategic role of whole system technical adviser will be valuable but adding a range of additional delivery activities may present a conflict for management priorities. The FSO will have to expand its capabilities and priorities significantly under this model.
- FSO organisational model – we consider it crucial that the FSO is demonstrably independent. Our view is that the constitutional form of the FSO should be decided once the functions and outcomes to be delivered have been settled: form follows function.
- Implementation – we suggest that implementation plans should be aligned with code reform and include opportunities for competitive tendering of central delivery and code management services.
- Impact assessment – this appears to show significant benefits from FSO/DSO interactions but with little evidence to show how this will be achieved. The FSO/DSO interaction is not addressed by the proposed reform.

Finally, we would urge that early decisions are made on progressing code and FSO reform to achieve the expected benefits. Gemserv is keen to be an active participant in enabling and delivering these reforms.



Yours sincerely

Nigel Wilkinson

Head of Energy Consulting

Gemserv

**Email** [nigel.wilkinson@gemserv.com](mailto:nigel.wilkinson@gemserv.com)



## Annex: Response to consultation questions

This annex addresses the specific questions raised in the Energy Future System Operator consultation. These are set out in response to the following main consultation areas:

- A. The case for change
- B. What should a future system operator do?
- C. FSO organisational model
- D. FSO implementation
- E. FSO impact assessment

### A. The case for change

#### **1. Do you agree that net zero will create the need for new technical roles in the electricity and gas systems, and require a new approach to energy system governance?**

We agree that a new approach to energy system governance is needed for Net Zero. In our response to the energy codes consultation, we have set out our strong support for the BEIS/Ofgem reform objectives for a code framework that will:

- be forward-looking, in line with net zero goals and benefit existing and future consumers
- accommodate a growing number of market participants and ensure compliance
- be agile and responsive to change
- make it easier for any market participant to understand the rules

In our response to this consultation, we have supported Option 1, which proposes Ofgem as a strategic body giving direction to separate licenced code managers and central delivery bodies, all selected by competitive tender.

We also consider that Net Zero governance reforms should embrace an increasingly diverse whole energy system, extending beyond the meter and into other vectors such as transport. We agree with the findings from Ofgem's earlier review of GB Energy System Operation which concluded that:

- net zero requires a step change in whole system coordination and planning
- system operators will play a key role in this change
- there is a strong case for a fully independent system operator

There will be an increased need for coordination across the whole energy system and for agile change to ensure that new participants can enter the energy markets, but these will involve commercial, regulatory, data, financial and operational issues as well as engineering. We would suggest that the new technical roles that are emerging are more to do with coordination across the whole energy system, because the physics of the energy system will remain basically unchanged.

As such, we agree that there is a need for governance of the technical and engineering design and operation of the energy system to change, but this must be aligned with the other aspects of governance reform. It will be



important that the technical and engineering aspects of reform both address the challenges of Net Zero and enable the greater accessibility to energy markets that will be needed in the future.

**2. *Do you agree that the establishment of a Future System Operator is needed to fulfil the kinds of technical roles needed to drive net zero?***

Earlier this year, Ofgem recommended that an independent system operator should be given additional responsibilities for providing independent advice, more direct planning of onshore and offshore electricity networks and the introduction of competition in network solutions; and a more active role in designing and planning the future energy system.

The consultation proposes a FSO which is independent of commercial energy interests, and able to both run the day-to-day operation of the electricity system and look holistically at long term electricity and gas challenges to support the transition to net zero. It is proposed that the FSO will need to be technically expert, operationally excellent, accountable to consumers, independently minded, and operationally/financially resilient.

We agree that more effective strategic planning, management, and greater coordination across the energy system could deliver significant customer benefits, but we also think that the FSO must be responsive to the needs of customers and market participants. If it is not proactive in terms of anticipating the need for change and delivering change, then these benefits will be lost. The consolidation of many activities in a single new entity runs the risk of creating a bureaucratic, unresponsive organisation that is focused on its own deliverables, rather than its enabling role across the industry i.e., just another larger industry silo is created. Overall, we welcome the creation of the FSO to undertake a wider whole system planning and operational role to help realise Net Zero. But such an organisation must be established to help drive benefits across the whole energy system as it transitions to Net Zero. It must help create an environment that attracts efficient long-term investment, delivers efficient markets and administration costs, maintains energy security of supply, and enhances competition from a wider range of energy market participants.

**3. *Do you agree that a Future System Operator should have roles in both the electricity and gas systems?***

We consider that the combination of electricity and gas system operation has merits in that it should

- a. enhance whole system analysis and planning decisions,
- b. ensure independence of gas system planning and operation,
- c. provide opportunities for consolidation and efficiency savings in operational delivery functions, and
- d. reduce the number of organisational interfaces in the industry.

In our code administration role for the REC and SEC, we undertake combined electricity and gas functions and consider there are significant benefits in providing a common interface to customers, coordinating change across electricity and gas markets, and delivering efficiencies.

It is important that the benefits and timing of combining GSO and ESO planning and delivery activities into one organisation are fully examined. The FSO will also have several whole system priorities which will require



organisational change. The addition of the GSO planning function may cause other more urgent activities to be delayed. As an interim approach, it may be appropriate to transfer gas planning activities to the FSO, but we think the benefits of combining these functions permanently needs to be carefully assessed, including risks of separating planning from operation. If the potential benefits of planning consolidation were limited, the GSO could remain as a separately performed delivery activity.

Looking forward, it will also be important that the FSO should consider the implications associated with potential hydrogen networks and transport energy use. This should form a valuable strategic whole system advisory role.

**4. *Do you agree that a Future System Operator should be entirely separate from National Grid plc?***

Yes, we consider it will be critical for the FSO to be independent from other industry interests and influence, including from National Grid. Given its history of National Grid ownership and influence, the future ESO and its staff will need to demonstrate that they are free of historical conflicts and are both committed and accountable for delivering the new mandate.

We suggest this should not only be a separation from National Grid control and influence, but to replace this by clear accountability to its customers and stakeholders. We consider this must include direction from Ofgem as the strategic body under code reform proposals.

**5. *What issues are there with existing institutional arrangements in the UK energy system in relation to system-wide decision-making and planning?***

Currently, there are many different entities that have roles and responsibilities in relation to energy system planning. These include the ESO, Ofgem, BEIS and many other public e.g., CCC, and private organisations e.g., network companies.

We consider the main issue to be the lack of co-ordination between these parties and consequent agility to adapt to the rapidly changing energy system technology and market dynamics. This should be addressed by establishing clear accountabilities and responsibilities for the key players, including how they coordinate and deliver change in an agile way.

We suggest that it will be critical that the FSO's role is clearly defined such that its planning advice is focused on whole energy systems. At present the ESO's focus is on short term system operation and balancing markets and long-term network investments. For the FSO to assume a strategic advisory role, it would appear necessary that its role is more clearly defined, and that the roles of BEIS and Ofgem are clearly defined.

**6. *What examples/case studies are you aware of where net zero delivery in one part of the energy system did not adequately account for cross-system impacts or costs?***

One example we would highlight is the smart metering rollout, where the meters are being installed to deliver customer benefits by enabling energy efficiency, smarter networks, and low carbon technologies 'behind the meter'. However, the evolution of customer-led energy solutions such as electric vehicles and storage, risks additional costs from the duplication of metering and communication systems. Moreover, technical/process complexity presents barriers to customers investing in these technologies.



Similarly, DNOs may be duplicating metering and communication costs on their LV networks and developing flexibility markets that are designed to address network congestion rather than enabling local and national energy markets.

It is difficult to predict all these impacts and consequences in a rapidly moving market, where some policy and investment decisions need to be taken years in advance. What is important, however is that governance structures are in place to recognise such issues as they occur and then do something about them in an agile yet considered way.

## **7. *Where should government focus in our efforts to improve systems thinking and coordination across the energy system?***

We suggest that the Government and Ofgem should prioritise the establishment of an appropriate governance framework for the whole energy system with clear accountabilities for both decisions and coordination. This should address the roles and responsibilities of BEIS and Ofgem as well as the ESO. This should complement the proposals for code reform which are being consulted on separately.

In this regard, we agree that the FSO should take on responsibilities for strategic planning and advising Government on these issues, together with ESO operational roles as at present. The three main changes from this reform should be:

- Ensure full independence of the FSO from commercial interests
- Build an entity that can provide whole system strategic technical advice to Government and Ofgem as decision makers
- Build an entity that can use its expertise to lead whole system planning.

In this respect, we consider that it will be important to ensure that this does not just build another specialist industry silo, as the whole system benefits will emerge from engagement with other participants in the energy transition.

It will also be important that the FSO looks outside its current operational focus on short-term system operation & balancing and long-term transmission planning, to understand and advise on all other aspects of the whole energy system. Assuming that the FSO can build this additional knowledge capability, it will also be important to define the FSO's role with regard to:

- Leading agile transformation programmes to improve industry-wide delivery processes and market rules so they are consistent with Net Zero aims
- Delivering industry processes alongside strategic advice. While the combination of these functions should allow valuable expertise to be shared, it may also give rise to an internal conflict of priorities e.g., by designing and planning an energy system that is less risky to operate, but may not deliver the available benefits
- Allocating responsibilities based on proven FSO competences – simply loading more responsibilities onto the FSO because they are not wanted elsewhere, risks creating more barriers to the achievement of Net Zero. Innovation and new business models are increasingly occurring behind the meter, or in markets or networks where the FSO currently has limited experience.



- Competition – while we recognise the value of having a single technical adviser in the industry, there are many delivery activities that are currently performed by the ESO and in future by the FSO that could be opened up to competition. We suggest that many of the FSO services may have the potential for being provided through competitive tendering and this should be included in any reform design.

## B. What should a Future System Operator do?

### **8. Do you agree that the FSO should undertake all the existing roles and functions of NGESO? If not, please explain why.**

The consultation proposes that all the current National Grid ESO roles and functions are carried out by the FSO, due to the synergies between balancing the electricity system and analysing its future needs. These activities are:

- control room operations;
- market development and transactions; and
- system insight, planning and network development

We agree that these are the existing functions that should be transferred to the FSO. However, we strongly suggest that ESO code functions should be competitively tendered as per the code reform proposals.

The consultation suggests that for gas, these synergies are weaker, while potential cost and risk of separating real time operation from gas asset ownership is greater. The consultation proposes that, of the existing roles in the gas system, the FSO should undertake strategic network planning, long-term forecasting, and market strategy functions, but not real time system operation and associated activities. We agree with this approach.

### **9. Do you agree there is a case for the FSO to undertake the long-term strategic functions outlined in Option 1? Please elaborate and provide any views on the functions outlined in Option 1.**

The consultation considers that the FSO could support decisions by Government, Ofgem and other organisations through providing targeted advice based on its expertise on the impact of different potential decisions on the energy system. These include potential new or enhanced roles and functions in:

- system planning and network development
- driving competition in energy networks
- energy market design
- coordination with distribution networks
- heat and transport decarbonisation
- energy data
- engineering standards and energy code development
- hydrogen
- CCUS





The activities described above suggest the FSO will perform a role significantly greater than that of a whole system technical adviser and planner. For example, long-term energy market design will go far beyond the current ESO expertise in balancing markets, and will require significant commercial and trading expertise. Also, a number of these activities e.g., distribution network coordination, and local energy markets for distributed energy, will require significantly different relationships from those that the ESO currently possesses. The FSO should be well placed to provide greater whole system insight in future, but this will be limited by capabilities, experience and industry knowledge. We suggest that adding a plethora of additional responsibilities to an organisation that does not have proven capabilities in these areas is risky, potentially leading to delays or safe short-term decisions which may have to be reversed over time.

**10. Do you agree that there is not currently a case for the FSO to undertake all GSO roles and functions, including real-time gas system operation, as outlined in Option 2? If you do not agree, please explain why.**

Yes, we agree – please see our answer to Q8 above.

**11. Do you have views on the proposal for an advisory role? What organisations do you consider would benefit from the provision of advice by the FSO? Who should bear the costs of providing that advice?**

Yes we agree the FSO should be able to provide valuable engineering and system operational advice to Government Departments, Ofgem and other arm's length advisory bodies such as the CCC and Infrastructure Commission. We suggest that this advice should be funded through levies on consumers (similar to Ofgem licence fees) so as to avoid potential conflicts of interest.

**12. Do you have any views on the other areas where we are considering new and enhanced roles and functions for the FSO?**

Please see our answer to Q's 7, 8 and 9 above.

In addition, we support that the FSO reform and code reform should be closely linked – the future leadership in code and industry transformation needs to be clear. As well as defining enhanced roles for the FSO the roles and responsibilities of Ofgem, BEIS, and other industry bodies should be defined to provide clear accountability.

## C. FSO organisational model

**13. What are your views on our proposed characteristics and attributes of a future system operator and how the models presented would deliver against them? Are there other characteristics or attributes that we have not yet considered?**

The consultation proposes that an FSO able to effectively fulfil the proposed roles will need to have the following characteristics:

- technically expert, with an in-depth understanding of the electricity and gas systems and the ability to access and use sector-wide knowledge;
- operationally excellent, with an ability to act with agility and adapt in the context of net zero;
- accountable to consumers and the public, delivering within a robust regulatory regime set by Ofgem, and within the strategic policy context set out by the Government in the Strategy and Policy Statement;



- independently minded, by acting – and being perceived to act – without undue influence from other energy interests or Government; and
- resilient, both operationally and financially.

We agree these are appropriate attributes for a FSO organisational design to consider. However, these are high level and the key test in understanding whether these have been satisfied will be if the FSO is delivering the proposed whole system Net Zero objectives.

These requirements basically seek to ensure that the FSO will have the right skills and capabilities, funding and governance to deliver its objectives. The risk of adding these capabilities to an incumbent appointed without competitive tender is the information asymmetry that will exist in the funding and performance target negotiation. The regulatory regime will need to address this, ensuring value for money is demonstrated. The areas that are not addressed by these criteria are the potential behavioural and cultural issues that will need to be addressed by simply expanding an industry incumbent. The FSO will need to be proactive, agile, transparent, and competent, delighting customers with its performance.

#### ***14. Are we considering the right organisation models for the FSO? And why?***

Based on the proposed FSO roles, characteristics, and attributes, the consultation explores two different organisational models for the FSO:

1. a standalone privately owned model, independent of energy sector interests; and
2. a highly independent corporate body model classified within the public sector, but with operational independence from government.

We see merits in both approaches – the privately owned model allows profit incentives to be applied, albeit that these will be limited as they will form part of a regulatory negotiation. But the risk of shareholder self interest in mitigating business risk, possibly taking safe instead of best options, may impact delivery timing and progress. However, a private sector organisation will probably find it easier to build the technical capabilities needed.

The publicly-owned model could ensure independence and full accountability and address the risk of shareholders' interest disrupting the FSO's ability to deliver. It is expected that BEIS (and HMT) would have oversight of budgets. But, there is a risk that a public sector body may not be able to attract the skills required. Our view is that the constitutional form of the FSO should be decided once the functions and outcomes to be delivered have been settled: form follows function.

#### ***15. Are we considering the right elements for the FSO's regulatory and accountability frameworks? And why?***

The consultation proposes that the fundamental elements of the FSO's regulatory framework will be similar for both models and will incorporate legislation, a Strategy and Policy Statement, licences and codes, and funding through network charges.

We agree it is critical that the FSO should be free from perceived or potential conflicts of interest within the energy sector and short-term operational influence from central government. Alongside this we agree that



the FSO will need strong relationships to energy market participants, consumers, regulators and other organisations with energy interests.

We think a regulatory framework set by licence or legislation, with clear accountabilities is an appropriate approach. We recognise that a privately owned FSO, if it is profit-making, would be incentivised through its profit to drive performance. The non-private FSO would not be driven by shareholder or profit interest which may place greater reliance on regulatory or government oversight.

**16. Do you have views on the level of shareholding or control involving other 'energy interests' and the FSO at which a conflict of interest would become a concern?**

We consider that any level of interest which allows a single stakeholder or group of stakeholders to exercise control would be a concern, and would reduce confidence in the FSO an independent, trusted technical expert.

**17. Are we considering the right implications of our proposals for Elexon and Xoserve?**

The consultation suggests new governance and regulatory arrangements may need to be established for Elexon as the FSO is created but no change is proposed for Xoserve. The consultation proposes that any reform must ensure Elexon retains its operational independence and remains accountable to the industry it serves.

We agree that the integrity of energy system support activities must be maintained. We welcome that these issues are also being addressed in the code reform consultation. We suggest that the FSO and code reform proposals should always consider the opportunities for all such services to be competitively tendered, and consolidated where appropriate.

## D. FSO implementation

**18. What is your view on the preferred implementation approach? Please explain why.**

The preferred approach set out in the consultation is that there would be a phased implementation of the FSO, with the FSO taking on all the existing capabilities and functions of NGESO as a first step, followed by phased introduction of any further functions of the FSO. This aims to minimise the risk of disruption to the operation of energy networks during the transition, by enabling control of the amount of simultaneous change to system operation arrangements.

We support this first step of making the FSO fully independent is supported, but suggest that a clear implementation plan is developed with decision points, especially where the FSO is taking on additional delivery functions. We suggest opportunities for competitive tendering of services is considered as part of this plan.

**19. Based on the areas where we are considering new and enhanced roles and functions for the FSO, which of these should be prioritised for development? Please explain why.**

We suggest the role of the FSO as strategic technical adviser is developed first rather than focusing on assigning additional delivery activities. The move to become a strategic technical adviser will be most important and may be most difficult to realise as it will new mindset from the ESO.



ESO should be an adviser in all the defined areas, but not automatically assumed to be the delivery body – being assigned delivery responsibilities may detract from the independent advice.

**20. What do you believe are the risks to implementation? How can these be mitigated?**

We consider some of the key risks associated with the FSO implementation include:

- Organisational and capability failure risk – placing additional requirements on an organisation that cannot deliver them
- Industry transformation risk – the creation of a new central body hinders the industry transformation already underway
- Decision making and delivery are linked in a single organisation, potentially leading to strategic decisions not being prioritised

**21. Do you have any comments on potential implications of implementation for you, your organisation, or other stakeholders?**

We think the most important issue for Genserv is to obtain a clear understanding of the delineation of the FSO future roles that may impact our responsibilities, including as:

- A strategic technical adviser to Govt/Ofgem in its areas of expertise, including network and energy planning
- A delivery body and decision maker for ESO (and maybe GSO) activities
- A code manager for technical codes

In addition, we would wish to understand how we will be able to help the FSO in its work, potentially contributing our wide industry experience and ideas we have for innovation and improvements. We can offer expertise that the ESO does not have in electricity markets, including in retail energy and associated codes, and also in coordination across energy vectors.

## E. FSO impact assessment

**22. What is your view on the position there are likely to be cost savings across the energy system from an increased “whole system” view, as described in paragraphs 47-52 of the IA? If so, is the potential magnitude of savings illustrated fairly in the IA? If not, why not?**

We note that the cost benefit analysis is highly dependent on improved ‘whole system’ decision making with the expected benefits as follows:

- Electricity: £210 million to £2500 million,
- Natural Gas: £50 million to £300 million,
- Hydrogen £30 million to £300 million

The basis for these calculations appear high level and difficult to directly attribute to FSO decisions once it is created. For example, it might be expected that many whole system benefits might emerge through greater



coordination between the FSO and DNOs, but this coordination does not appear to be part of the FSO's future role.

**23. What is your view on the conclusion that policy intervention is likely to increase the benefits of onshore electricity network competition, as described in paragraphs 53-59 of the IA? If you agree, is the potential magnitude of savings illustrated fairly in the IA? If not, why not?**

We have no comments on the savings but note that adding a further commercial delivery function to the technical expert FSO may dilute its focus on its core role. There may be other organisations that are better placed to perform these activities.

**24. Do you think that the impact assessment has identified and considered the key costs and benefits of policy intervention? If not, can you provide details on other impacts that have not been considered?**

**Risks** - the impact assessment also identifies several risks associated with the implementation of the FSO, including:

- Increased inefficiency of the SO under the FSO, with higher internal costs
- Increased uncertainty in governance structure e.g., future roles of DSOs
- Reliance on single view of the energy system – no single party can be expected to have all the relevant knowledge, and may lead to uninformed decisions and advice

We agree that these are significant risks which should be fully considered before decisions are taken. In addition, we think there are further risks that may also need to be considered. These include:

- Organisational and capability failure risk – placing additional requirements on an organisation that does not have the capabilities or incentives to deliver them
- Industry transformation risk – the creation of a new central body hinders the industry transformation already underway
- Decision making and delivery are linked in a single organisation, potentially leading to operational delivery being prioritised ahead of strategic decisions

**25. Do you think that the distribution of impacts is fairly represented, with impacted groups correctly identified? Outlined in table 5 of the IA.**

We suggest that the consultation should take full account of the needs of future energy market participants alongside those expressed by the existing market participants. Future energy markets will increasingly be two-sided markets where consumers participate in markets with their own energy resources alongside large-scale energy producers and suppliers.

Gemserv has extensive experience of engaging with a wide range of existing and prospective market participants. These include prosumers, EV owners, and developers of new technological or business solutions. We suggest that the code and FSO reforms will benefit a wide range of new market participants who may not yet be able to respond to this consultation. As the likely main beneficiaries of these reforms, we suggest that it is important that these views are taken into account.



**26. We invite respondents' views on whether the proposals for energy system governance reform may have a different impact on people who have a protected characteristic (age, disability, gender re-assignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex or sexual orientation), in different ways from people who don't have that characteristic. Please provide any evidence that may be useful to assist with our analysis of policy impacts.**

This initiative should help to remove any potential barriers to people who share a protected characteristic from participating in energy markets, either on their own account or through other market participants that are addressing their needs.